Regulatory Impact Statement: Introducing location-specific minimum stockholding obligation for jet fuel at Auckland Airport

Coversheet

Purpose of Document	
Decision sought:	Analysis produced for the purpose of informing a Cabinet decision on introducing secondary legislation requiring location-specific minimum stockholding obligation for jet fuel at Auckland airport.
Advising agencies:	MBIE
Proposing Ministers:	Associate Energy
Date finalised:	13 November 2024

Problem Definition

Existing jet fuel storage in Auckland provides for less than the recommended 10 days' cover of jet fuel during peak demand periods. Investment in jet fuel resilience for the airport has not matched demand as there are limited commercial incentives or obligations for fuel companies to build additional fuel storage.

Executive Summary

New Zealand has recently experienced several jet fuel rationing incidents with impacts particularly felt at Auckland Airport. In 2017, the vulnerabilities of the airport's jet fuel supply chain were highlighted when the only pipeline that supplies jet fuel to the airport, the Ruakākā to Auckland pipeline (**RAP**), was ruptured by a digger and jet fuel could not be transported through the pipeline to the airport for two weeks.

All jet fuel for the airport is transported from the Marsden Point import terminal through the single 170km RAP to the Wiri terminal (**Wiri**) near the airport. Wiri is the main fuel storage facility in the Auckland region. Fuel is then transported primarily through the 6km long Wiri to Airport pipeline (**WAP**) to the Joint User Hydrant Installation (**JUHI**) before being pumped into aircraft (it can also be trucked). The RAP is a single point of failure for the airport. If there is another incident where the RAP is shut down, there is no other way to transport jet fuel to the airport.

The 2019 Government Inquiry into the Auckland Fuel Supply Disruption (**the Inquiry**) recommended resilience measures for storage of at least 10 days' cover at 80 per cent of peak operations. It recommended that the "fuel sector commits to building new infrastructure" and for the government to intervene if they failed to make sufficient progress within 10 months of the Inquiry (ie June 2020). The fuel sector has not yet made any investment decisions as of November 2024.

There was insufficient storage at Wiri and JUHI earlier this year in the high demand season to provide for the recommended 10 days' cover at 80 per cent of peak operations. Investment in jet fuel resilience for the airport has not matched demand as there are limited commercial incentives or obligations for fuel companies to build additional fuel storage.

The options discussed in this RIS focus only on the Inquiry's recommendations relating to additional jet fuel cover at or near Auckland Airport. The preferred option is to place a location-specific minimum stockholding obligation (**MSO**) for jet fuel on fuel companies, which own and operate the jet fuel infrastructure at the Airport. This would be done by making regulations under section 58 of the *Fuel Industry (Improving Fuel Resilience) Amendment Act 2023.* The location-specific MSO would require stockholding of 10 days' cover at 80 per cent of peak operations at Wiri and JUHI.

Feedback during targeted consultation

MBIE consulted with key fuel industry and aviation stakeholders - Air New Zealand, Auckland Airport, Board of Airline Representatives New Zealand (**BARNZ**), bp, Channel Infrastructure, International Air Transport Association (**IATA**), Mobil, Z Energy and Energy Resources Aotearoa (**ERA**). Stakeholders provided feedback on options and key features of proposed regulations, covering matters such as the commencement date of the regulations, the days' cover, who should hold the obligation and where the jet fuel should be located. We held two meetings with stakeholders and sought written answers to a questionnaire.

Airlines and infrastructure owners (including the Airport) support the proposed regulations. Fuel companies and their industry body did not support the regulations as they considered them unnecessary with the work underway.

There was universal agreement that the obligation should fall on persons who have the right to draw fuel from the JUHI. There was broad support for allowing fuel stored at Wiri and the JUHI to be counted.

There was a split between the number of days' cover. Fuel companies preferred 10 days' cover at 80 per cent operations whereas airlines and the Airport preferred a larger stockholding requirement of 12 days' cover at 80 per cent operations.

Limitations and Constraints on Analysis

This Regulatory Impact Statement (**RIS**) focuses on options to enhance Auckland Airport's jet fuel resilience. It only considers options that result in certain levels of jet fuel to be stored at or near the Airport to mitigate fuel disruption risks and increase supply chain resilience. It does not consider broader measures to enhance the Airport's resilience, such as considering the role of other parts of the supply chain, alternative aviation fuels, or encouraging greater competition in the supply of jet fuel.

1. Limitation in quantifying cost of disruptions

Modelling and analysis on the impacts of a disruption in the jet fuel supply chain, including a Wiri or RAP disruption, was done for MBIE in 2019. Jet fuel demand in 2024 is roughly the same as that in 2019. However, the modelling was done when the Marsden Point oil refinery was still operating and had the ability to refine jet fuel domestically. In addition, the Wynyard wharf in Auckland city, where jet fuel was shipped and stored as an emergency back-up measure during the 2017 fuel disruption incident, was also operational. Both the refinery and the wharf have now been closed so the nature of risks has changed.

We lack detailed information on the costs of disruption. MBIE periodically commissions studies into our fuel security, including considering disruption scenarios. The most recent was completed in 2020 (*Fuel Security and Fuel Stockholding Costs and Benefits 2020*) and a new fuel security study will be completed early 2025. While we have a good

understanding of the risks, we are not able to quantify the up-to-date costs of a supply disruption at this stage.

2. Limitation in visibility of stockholding levels in the jet fuel supply chain

MBIE collects data on jet fuel consumption and use on a national scale. We currently don't have any visibility of jet fuel demand and supply at Auckland Airport and we lack quantitative analysis of stockholding levels. The *Fuel Industry (Improving Fuel Resilience) Amendment Act 2023*, from 1 January 2025 will require fuel companies to disclose information along the jet fuel supply chain that will enable the government to monitor compliance with the MSO and to improve information collected on New Zealand's fuel security.

Responsible Manager(s) (completed by relevant manager)
Dominic Kebbell Manager Gas and Fuel Policy Ministry of Business, Innovation and Employment *13 November 2024*

Quality Assurance (completed by QA panel)	
Reviewing Agency:	MBIE
Panel Assessment & Comment:	The Ministry of Business, Innovation and Employment's Regulatory Impact Assessment Review Panel has evaluated the Regulatory Impact Statement "Introducing location-specific minimum stockholding obligation for jet fuel at Auckland Airport" and considers that it **meets** the quality assurance criteria. The panel is satisfied with the problem definition, options identified, analysis undertaken, and the consultation process.

Section 1: Diagnosing the policy problem

What is the context behind the policy problem and how is the status quo expected to develop?

Auckland is vulnerable to jet fuel supply issues

1. Aviation is crucial for New Zealand's connectivity, tourism, trade, and regional development, supporting the economy and well-being of people. Pre-COVID, the aviation industry contributed 11.2 per cent to New Zealand's GDP and delivered $23 billion of our cargo imports and exports. These figures are expected to grow as we recover from the impacts of the pandemic and the demand for air transport increases.
2. Auckland Airport is New Zealand's key transportation hub and largest and busiest airport. It is a gateway for 75 per cent of our international visitors and 90 per cent of high

value airfreight. There would be significant economic and social impacts if its operations were curtailed because of insufficient jet fuel supplies.

3. All jet fuel for the airport is transported from the Marsden Point import terminal through a single 170km long pipeline, the Ruakākā to Auckland pipeline (**RAP**), to the Wiri terminal (**Wiri**) near the airport. Wiri is the main fuel storage facility in the Auckland region. Fuel is then transported primarily through the 6km long Wiri to Auckland Airport pipeline (**WAP**) to the Joint User Hydrant Installation (**JUHI**) before being pumped into aircraft (it can also be trucked).

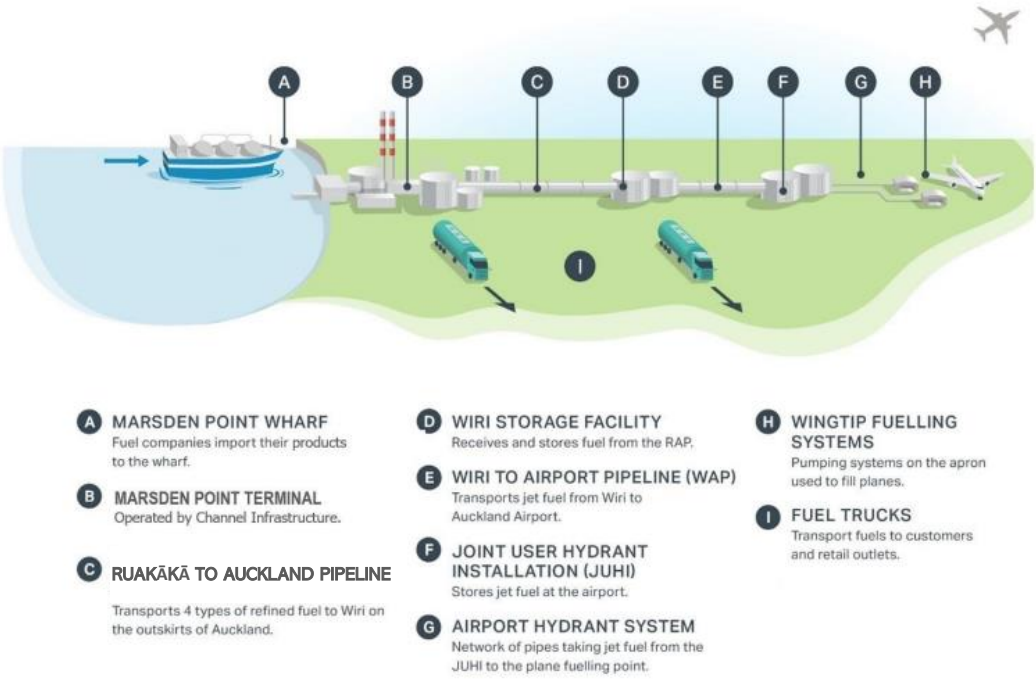

Figure One: Auckland Airport's jet fuel supply chain

4. In 2017, the vulnerabilities of the Auckland jet fuel supply chain were highlighted when the only pipeline that supplies jet fuel to the airport, the RAP, was ruptured by a digger and jet fuel could not be transported through the pipeline to the airport for 10 days.

5. There have also been issues with imported jet fuel quality not meeting fuel quality standards, causing jet fuel rationing across New Zealand airports. Auckland Airport has told us that more than 25 airlines were impacted due to fuel quality issues in December 2022. New Zealand has limited ability to treat off-spec jet fuel since the closure of Marsden Point oil refinery in April 2022.

6. The RAP is a single point of failure for the airport. If there is another incident where the RAP is shut down, backup emergency measures would need to be taken to transport jet fuel to the airport.

Auckland's jet fuel supply chain infrastructure and ownership

7. The jet fuel supply chain is vertically integrated. The three major fuel companies, bp, Mobil and Z Energy, are involved at every stage, from importing the jet fuel to the storage, transfer, and sale of it.

8. The Marsden Point import terminal and the RAP are owned and operated by Channel Infrastructure. The import terminal has approximately 115 million litres (**ML**) of jet fuel storage in private and shared tanks. The RAP can only transport one fuel at a time, and

cycles between three fuels (diesel, petrol, and jet fuel). Jet fuel injected at Marsden Point takes 30 hours to arrive at Wiri terminal.

9. The two storage facilities at the airport, Wiri and the JUHI, are controlled through joint venture agreements between the three fuel companies. This can result in more efficient infrastructure services but can also create entry barriers for new entrants. A new entrant can only access the fuel facilities by buying equity in the infrastructure, but this needs to be approved by each of the joint venture participants, and to date there have not been any new entrants to the joint venture agreements.

10. Although the companies own the infrastructure, they have appointed Wiri Oil Services Limited to manage and operate the day-to-day operations of the Wiri terminal and the WAP.

11. Auckland airport owns the land where the JUHI is located but leases it to the joint venture. bp is the operator of the site on behalf of the joint venture participants. The lease for the JUHI is due to expire in 2035.

12. Wiri has jet tank capacity of 35ML and the JUHI has a tank capacity of 9.5ML. In theory if all tanks were full, this is roughly 11 days of cover assuming an average daily demand of 4ML or eight days during busy periods when demand increases to 5-6ML. However, in practice, the fuel supply chain is dynamic with fuel being pumped in and out of tanks at all times, meaning the tanks are never all full at the same time. Jet fuel must also settle for a period of time for quality purposes at both Wiri and JUHI before it is certified for use.

13. Note that throughout this RIS, there is a distinction between storage capacity and cover/stock. Storage capacity refers to space available to store liquid fuel. Cover or stock refers to the actual quantity of liquid fuel.

Progress on improving jet fuel resilience

14. The 2019 Government Inquiry into the Auckland Fuel Supply Disruption (the **Inquiry**) was established in response to the fuel supply disruption caused to the Auckland region, including the airport, when the RAP was ruptured in 2017. The aim of the Inquiry was to understand the cause, response and state of the fuel system and make recommendations on how the fuel industry and government could improve resilience of fuel supply in the Auckland region. It covered all three fuels, petrol, diesel and jet fuel.

15. The Inquiry consulted with key stakeholders including the fuel companies, the airport, airlines and government agencies. The process was open for wider public participation. It also visited the key sites including the Wiri terminal, commissioned an independent expert from Australia to assess the resilience of the jet fuel supply chain, and met with government agencies in New Zealand and Australia working on related matters.

16. The Inquiry was satisfied with the resilience of petrol and diesel given the multiple supply chains of these fuels into Auckland and sufficient storage in the system.

17. However, it found that Auckland's jet fuel supply chain was not sufficiently resilient and recommended that fuel companies make "immediate investment decisions without delay" to build jet fuel infrastructure in line with the following suggested resilience enhancing measures:

    - diversity of supply (having alternative ways of bringing fuel to market such as a second pipeline)
    - storage at or near Auckland Airport that provides at least 10 days cover at 80 per cent of operations, based on the average of 30 non-contiguous peak days in a calendar year
    - input capacity to the JUHI of 110 per cent of peak day demand (if the peak days' demand is forecast to be 5ML of jet fuel, the combined input capacity of WAP and

other supply options such as trucking should be able to accommodate 5.5ML of jet fuel).

18. The Inquiry recommended the government:

    - begin work immediately to develop and enact new legislation to enable it to step in "should the fuel sector not be able to take into account the public interest in resilience adequately when making investment decisions relating to fuel infrastructure"
    - monitor the fuel sector's progress through quarterly updates and intervene if the sector had not been able to make the necessary progress, such as making definite decisions to commit capital to relevant construction projects, by 30 June 2020 (ie 10 months after the recommendations were made).

19. Since the Inquiry's report, the Government has implemented a policy package to improve fuel resilience. This included the *Fuel Industry (Improving Fuel Resilience) Amendment Act 2023* (the **Amendment Act**)[1], which amended the Fuel Industry Act 2020 (the **Act**). The Amendment Act provides for the minimum fuel stockholding obligation (**MSO**). From 1 January 2025, fuel importers must hold 24 days of jet fuel based on estimates of national average commercial stockholding levels. Most of the jet fuel used to comply with this obligation is likely to be held at Marsden Point terminal. The only feasible way to transport the fuel is through the RAP.

20. The three fuel major fuel companies formed the Auckland Jet Fuel Supply Resilience Group (the **Group**) to provide regular progress reports to the Government on their work to improve jet fuel security at Auckland Airport in response to the Inquiry's recommendation.

21. The Group initially outlined plans to build more storage at Wiri in the progress reports, but these plans were delayed when jet fuel demand fell in 2020 because of COVID-19 and the pressure on the supply chain was eased. Demand is now back to 2019 levels and forecast to increase, but the Group has not made a decision nor indicated expected timeframes for decisions to invest in additional infrastructure as of the time of writing (November 2024).

22. The Group's March 2024 report stated that the storage at the airport was inadequate to meet the 10 days cover resilience measure recommended by the Inquiry. The report also identified three options for increasing jet fuel storage near the airport, all centred at the Wiri terminal. Two of the options consider building two 11ML new storage tanks. The third, and the Group's preferred option, considers reconfiguring 20ML of existing petrol storage into jet fuel storage.

23. The latest October 2024 report stated that following various engineering and other studies, the fuel companies have now aligned on the preferred option – to reconfigure an existing 20ML of petrol storage into jet fuel storage at Wiri.

24. The tanks at Wiri were built almost 40 years ago (eight of nine tanks were built in 1985 and one was built in 1995). The maximum volume of fuel Wiri can handle is 3.5 billion litres per annum. The pre-COVID levels for all fuels were getting close to this ceiling. The infrastructure has coped with increasing demand - but jet fuel demand is now back to pre-COVID levels and is projected to rise by 25 to 85 per cent by 2035, putting greater pressure on the existing jet fuel infrastructure at the airport.

Interdependencies

[1] The Amendment Act has staggered commencement dates. The provisions of that Act that concern stockholding obligations come into force on 1 January 2025 but for ease of reading, this RIS sometimes refers to those sections as if they are in force now.

25. This work has connections to the Government's priorities related to improving fuel security:

- Fuel Security Study. MBIE has commissioned a fuel security study to improve our understanding of New Zealand's fuel security requirements from now to 2035. The final report is due in February 2025. The study will quantify the impacts of disruptions.
- Fuel Security Plan. Findings from the fuel security study will feed into the development of a fuel security plan which will be a strategy document for building resilience in the medium to long term.
- The National Fuel Plan sets out the emergency response and readiness framework for coordination between the government and fuel supply industry.
- Minimum fuel stockholding obligation (MSO). The Amendment Act introduced the MSO that requires fuel importers to hold 21 days', 24 days' and 28 days' cover for diesel, jet fuel and petrol respectively at a national level from 1 January 2025. Our preferred option in this RIS would be implemented using the MSO framework.

What is the policy problem or opportunity?

Problem definition

26. Existing jet fuel storage in Auckland provides for less than the recommended 10 days' cover of jet fuel during peak demand periods. Investment in jet fuel resilience for the airport has not matched demand as there are limited commercial incentives or obligations for fuel companies to build additional fuel storage.

27. The consequences of a disruption are discussed in paragraphs 30 to 33.

Scope of the problem

28. The Inquiry recommended three resilience measures (see paragraph 17). The focus of the policy options contained in this RIS is on providing possible solutions to the lack of storage issue (ie the second recommendation made by the Inquiry).

29. This is because, storage is already falling short of the resilience measures recommended by the Inquiry during high jet fuel demand periods (eg during holiday periods) of at least 10 days' cover at 80 per cent peak demand.

Scale of the problem

30. Auckland Airport is our main airport. The airport precinct supports 20,000 jobs and contributes $3.5 billion to the Auckland region's GDP and is expected to contribute a further $2 billion with its infrastructure investment plans. There would be significant economic and social impacts if there were a reduction in jet fuel supply.

31. The *Economics of Fuel Supply Disruptions and Mitigations* report, completed for MBIE in 2019, suggests that a short-term disruption[2] to the RAP or Wiri would cause a loss of $23 million of New Zealand's GDP. A long-term disruption[3] to the RAP or Wiri would cause a loss of nearly $1.2 billion of GDP in the first six months. Given the regional nature of the disruption, over half of the impact would be felt in the Auckland region.

32. The modelling also quantified a Gross National Disposable Income as a proxy measure to assess welfare impacts. A short-term Wiri or RAP outage could cause a loss of $20 million and a long-term Wiri or RAP outage could cause a loss of $1 billion to New Zealand's GDP over a year.

33. Air New Zealand estimates a lost revenue of $13.8 million per day resulting from full operating restrictions at Auckland Airport. This estimate does not account for indirect losses to the economy nor the reputational impact of disruptions.

34. Auckland Airport and the Board of Airline Representative New Zealand (**BARNZ**) have told officials that international airlines consider the fuel security of an airport when deciding whether to maintain, increase or launch routes. The airport is concerned that fuel supply resilience could impact airline decisions on current and future routes. They have shared anecdotal evidence of international carriers expressing these concerns.

35. Even if the Group made investment decisions today, it would take at least two years to build and commission large infrastructure such as storage tanks. The Group anticipates additional jet fuel storage could be in place as early as the second half of 2026.

Root causes

36. The current market design incentivises fuel companies to maximise efficiencies and keep prices low. There is no regulatory enforcement and limited commercial incentives

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[2] Modelling assumed a nine day outage of the RAP and four days of stock is accessible at Wiri.

[3] Modelling assumed a Wiri outage for an extended period and takes at least four months to resolve the jet fuel shortage.

for companies to invest in fuel infrastructure for resilience, which largely benefits third parties. The fuel companies that own and operate the infrastructure appear to make just-in-time investments.

37. The joint venture agreements between fuel companies require consensus to make investment decisions. It appears that the fuel companies struggle to reach consensus on investment decisions. There is evidence from Australia that vertically integrated supply chains operating strategic jet fuel infrastructure under similar arrangements have been slow to invest in new infrastructure.

Why government intervention is required

38. Progress has been slow, and it is not clear there will not be ongoing delays. We are concerned with the ongoing delays in decision-making and unspecified timeframes, especially since the resilience standard of at least 10 days' cover at the airport set by the Inquiry was not met earlier this year. Continued delays in investing at the airport risk significant disruption to the aviation sector if there is a fuel security issue, and both Auckland Airport and Air New Zealand have spoken to us that further inaction risks smooth business operations.

39. We also note the Inquiry recommended in 2019 that the Government intervene within 10 months if the fuel companies had not made sufficient progress to improve fuel resilience (for example, by making definite decisions to commit capital to construction projects).

40. In the longer term, we are concerned that fuel companies may not continue to invest building new infrastructure that would be sufficient for keeping pace with increasing jet fuel demand at Auckland Airport.

What objectives are sought in relation to the policy problem?

41. As discussed in paragraphs 28 and 29, this RIS focuses on insufficient jet fuel being stored at or near the Airport.

42. Our primary objectives are:

- to increase the amount of jet fuel stored at/near the Airport as soon as possible, to meet the Inquiry's recommended level of at least 10 days' cover at 80 per cent of peak operations
- to ensure the amount of jet fuel stored at/near the Airport keeps pace with increasing jet fuel demand.

43. The secondary objectives are to:

- minimise costs whilst meeting the required level of cover
- minimise compliance burden on the industry and government.

44. Our objectives take into account the Inquiry's findings and recommendations.

Section 2: Deciding upon an option to address the policy problem

What criteria will be used to compare options to the status quo?

45. The criteria for the assessment of the options are linked to the objectives:

    - **Jet fuel cover at airport is resilient to disruptions:** amount of jet fuel storage at or near Auckland Airport provides for at least 10 days' cover at 80 per cent of peak operations. The storage is built as soon as possible, and infrastructure keeps pace with demand increases.
    - **Costs:** ensure that costs are minimised whilst meeting the required storage levels.
    - **Administrative efficiency:** minimise compliance burden to industry and the government.

46. These criteria are used to assess options to improve the Airport's jet fuel resilience (in Part 2.1) and different levels of jet fuel stockholding (in Part 2.2).

What scope will options be considered within?

47. The options discussed in this RIS focus only on the Inquiry's recommendations relating to additional jet fuel stored near Auckland Airport. Section 2 is therefore divided into two parts of options analysis:

    - Part 2.1 – should government intervene and who should be regulated
    - Part 2.2 – what level of cover should the intervention require.

48. Crown funding of the capital costs for the additional storage infrastructure was considered to be out of scope. Building fuel infrastructure is not core government business and funding could be challenging in the current fiscal environment.

49. We have discarded imposing a levy on flights to fund jet fuel resilience. New Zealand is a signatory to the Convention on International Civil Aviation, which exempts jet fuel for international travel from taxations and levies. As international flights consume around 85 per cent of the Airport's fuel, it would not be equitable to impose a levy on domestic flights to fund jet fuel resilience.

50. The Inquiry also recommended attention be given to the capacity of the WAP and to whether access to Wiri, the WAP and JUHI be opened to new entrants. These two matters are out of scope for this RIS.

51. The WAP is nearing capacity. Even if additional jet fuel can be held at Wiri, it would be unusable unless it can be delivered to the JUHI. However, given that Auckland Airport is considering moving the JUHI (but has not yet made any decisions) it would be premature to consider the role of the WAP until these decisions have been made.

52. The Inquiry stated that an open access arrangement[4] would not guarantee resilience but may enhance resilience by removing barriers to new entrants, address any competition issues and diversifying the supply chain. Tackling wider competition issues would slow us down from ensuring fuel security is available as soon as possible.

[4] Open access refers to arrangements for infrastructure where suppliers have equal rights to access the infrastructure through a fees-based, non-discriminatory pricing agreement with the owners or operators of the infrastructure.

Competition issues would be tackled by the Commerce Commission, but this matter is out of scope for this RIS.

53. Non-regulatory options are also out of scope. The government has employed non-regulatory options since the Inquiry was published, including requiring fuel companies to report on investment progress. The Group has submitted 14 progress reports since December 2019, which have included information about several storage projects. The frequency of reporting was six-monthly in response to the drop in jet fuel demand during COIVD-19 and uncertainty on the pace and scale of its recovery. In March 2024, jet fuel demand was back to pre-COVID levels and the reporting frequency was changed to quarterly. However, this has not resulted in increased storage or stockholding levels. It is not clear if continued or more frequent reporting would result in investment decisions. We consider using regulatory powers will ensure fuel companies take steps to improve jet fuel resilience at Auckland Airport.

Part 2.1 – Should government intervene and who should be regulated

What options are being considered?

54. We have identified three options (including the status quo) to expediate work on improving the jet fuel resilience at Auckland Airport:

- Option 1: Counterfactual / status quo
- Option 2: Obligation to hold jet fuel stocks at or near Auckland Airport
  - Option 2a: Obligation placed on the fuel importers
  - Option 2b: Obligation placed on Auckland Airport

Option 1 – Counterfactual / status quo

55. The Group's March 2024 report stated that the storage at the airport was inadequate in that period to meet the 10 days cover resilience measure recommended by the Inquiry. We have heard anecdotally that at times, days of cover at the airport has dropped to six days.

56. In the absence of intervention, it is probable (but not certain) that additional jet fuel infrastructure would be built at Wiri. Since December 2019, the Group has stated that they will build additional infrastructure in line with the Inquiry's recommended 10 days' cover at 80 per cent of peak operations but has not committed to investment.

57. As a joint venture, they need to reach consensus on a way forward. This has taken considerable time.

58. The Group has indicated that it expects to have additional storage in line with the Inquiry's recommendation to be available by end of 2026. Its preferred option is to reconfigure an existing 20ML petrol storage tank to jet fuel storage. Converting fuel storage tanks takes at least 18 months to two years.

59. However, it has not made decisions to commit capital to construction projects nor has it indicated a timeframe for making investment decisions. In the absence of government

intervention, it is possible that delays will continue to occur or that the Group invests at a lower level than recommended by the Inquiry.

60. As jet fuel demand continues to increase, so too will the need for additional jet fuel cover near the Airport. There is no guarantee that future investment will occur to keep pace with increased jet fuel demand.

61. Mobil, bp, Z Energy and ERA support this option. They do not consider there is a public benefit from intervening. Some have argued that government intervention risks further delaying investment decisions.

Option 2 – Obligation to hold jet fuel stocks at or near the Airport

62. Under this option, additional jet fuel would need to be held at or near Auckland Airport in line with the Inquiry's recommendations of at least 10 days' cover. This additional stockholding would better enable the Airport and airlines to continue operations (with rationing if needed) if there was a supply disruption, such as an outage of the RAP or off-spec jet fuel.

63. Requiring certain levels of jet fuel to be held at the Airport would ensure that additional infrastructure is built in the timeframes indicated, reducing the risks of disruptions to air services. Over time, the intervention would ensure that future investment in infrastructure occurs at the same rate as changes in jet fuel demand.

64. Jet fuel stored at Wiri or the JUHI at the Airport would be counted. The WAP can hold approximately 130,000 litres of fuel but can only operate if there is fuel at Wiri. If Wiri is dry, any jet fuel left in the WAP is not available. Stakeholder feedback on including WAP was mixed, but the majority favoured excluding the WAP.

65. There are two variations of this option. Option 2a places the obligation on fuel importers while Option 2b places the obligation on the Airport.

Option 2a – Obligation placed on fuel importers [Preferred option]

66. Option 2a would place the obligation to hold additional jet fuel on fuel importers that have the right to draw fuel from the Auckland JUHI. This would be done by making regulations under section 58 and 69 of the Act to impose a minimum fuel stockholding obligation on obliged parties for jet fuel at Auckland Airport (known as a location-specific MSO).

67. The Group owns, through joint ventures, all of the fuel infrastructure to the Airport, including the Wiri Terminal, the WAP and the JUHI (they lease the land for the JUHI from the Airport). They own the fuel until it is loaded into aircraft. The Group has also been considering how to increase storage since the Inquiry in 2019 and are advancing in their plans.

68. Fuel importers do not consider a location-specific MSO for jet fuel is necessary. They consider that they are advanced in their plans for additional storage and regulations would not make a difference.

69. While fuel importers do not consider regulations are necessary, they agree that, if regulations are going to be imposed, the appropriate point to place the obligation is on those who have the right to draw from the JUHI. We had considered placing the obligation on the joint venture that controls the infrastructure, but joint ventures are an operating entity and do not own the fuel stock.

70. This option would align with the Group's current timeframes to have additional jet fuel storage available by the end of 2026 (noting that converting fuel storage tanks takes around 18 months to two years). Arguably, there are no additional costs in the short-term if fuel companies invest as stated in the preferred option - albeit in a timely manner.

71. However, fuel companies have not made investment decisions and therefore the "new" spending could be attributed to this option. Following this approach, it is estimated that

investment costs for a 20ML tank could be around $40 million, assuming a conservative factor of $2 per litre based on industry information (this factor may vary for reconfiguring). Operating costs and costs of ancillary equipment would be on top of this estimate.

72. This option could increase the compliance burden on the fuel companies, but that increase would be minor or negligible[5]. The regulations would mirror fuel companies' current plans for additional infrastructure and should not impose any additional costs.

73. Fuel companies have told us that whether the government is going to impose a minimum stockholding obligation for jet fuel at Auckland Airport is, at least in part, creating uncertainty and delaying investment decisions. This option would provide the Group with certainty about how the location-specific MSO will apply to help avoid ongoing delays.

Option 2b – Obligation placed on Auckland Airport

74. This option would impose a location-specific MSO obligation as in Option 2a but would place the obligation on Auckland Airport rather than on fuel importers. This is similar to some examples seen in Australian airports (eg Perth airport has taken ownership of the jet fuel infrastructure).

75. Placing the obligation on the Airport would not meet the objective of increasing the amount of jet fuel stored at/near the Airport as soon as possible. The Airport would have to consider afresh how to invest in additional infrastructure to ensure it meets the obligation. It is more limited with its options for the location of additional storage than the Group as it is not part of the joint venture that controls Wiri Terminal. While the Airport could join the joint venture, this is likely to be complicated and lead to further delays.

76. This option has higher costs than Option 2a. Holding jet fuel compels a change in business models between the fuel companies and the Airport. It would also mean that the airport would have to build a fuel supply chain and market capability and become a major hazard facility under the *Health and Safety at Work Act 2015*.

77. This option has a higher compliance burden than Option 2a. There is no existing mechanism that would obligate the Airport to hold jet fuel, which would lead to delays as it is created.

78. No stakeholders consulted during targeted consultation supported this option.

[5] The minimum stockholding obligation, from 1 January 2025, requires fuel importers to hold prescribed stock levels of jet fuel at a national level. Fuel importers will count stock at Wiri and JUHI as part of the obligation.

How do the options compare to the status quo/counterfactual?

	Option 1 – Counterfactual	Option 2a – Obligation placed on fuel importers (location-specific MSO)	Option 2b – Obligation placed on Auckland Airport
Jet fuel cover at airport is resilient to disruptions	0 Storage at the airport was inadequate to meet the Inquiry's recommended 10 days cover earlier this year - although fuel companies appear to be making progress to add more storage, it is difficult to assess the timeline for investment decisions or whether there will be ongoing delays.	++ Aligns with fuel companies' current plans to build storage by end of 2026. Dynamic threshold for stock levels increases with jet fuel demand increases.	+ Uncertain whether this will deliver storage at the airport as soon as possible as this would need to change business model and government would need to introduce a new mechanism.
Costs	0	0 Arguably, no additional costs in the short-term if fuel companies follow up on their stated intention to build further fuel storage (this option ensures that investment occurs in the timeframe indicated). However, capital has not been committed at this stage and the obligation may be considered as 'new' spending. Tanks cost roughly $2 per litre a 20ML tank could cost around $40 million.	- - Depends on approach taken by airport. Tanks cost roughly $2 per litre so a new 20ML tank could cost around $40 million. A new facility would require new ancillary infrastructure (pipes, bunds, balance of plant), which would add to the cost of the tanks.
Administrative efficiency	0	0 Existing mechanism through regulations under the Act. Marginal compliance costs for fuel importers as the regulations would mirror fuel importers' current plans.	- - Requires a new mechanism and a new framework for compliance reporting for the airport. Airport would become a major hazard facility and have additional obligations under the *Health and Safety at Work Act 2015.*
Overall assessment	0	++	- - -

Key for options assessment:

++ much better than doing nothing/the status quo/counterfactual
+ better than doing nothing/the status quo/counterfactual
0 about the same as doing nothing/the status quo/counterfactual
- worse than doing nothing/the status quo/counterfactual
- - much worse than doing nothing/the status quo/counterfactual

What option is likely to best address the problem, meet the policy objectives, and deliver the highest net benefits?

79. Option 2a has scored the highest in the evaluation and is our recommended option.

Part 2.2 – What level of storage should the intervention require?

80. Our preferred option is to place an obligation on fuel companies to hold additional jet fuel stocks at or near the airport through location-specific regulations. There are choices for the level of stockholding that must be held.

What options are being considered?

81. We are considering two options for jet fuel stockholding: 10 days at 80 per cent operations (recommended by the Inquiry) and 12 days at 80 per cent (preferred by aviation stakeholders).

Option 2 – 10 days' cover at 80 per cent of operations [Preferred option]

82. This option would require at least 10 days' cover at 80 per cent of peak operations.

83. It reflects the Inquiry's recommendation of the days' cover based on the following:

- The IATA guidance for on-airport storage varies between 3 to 11 days depending on the supply chain risk. For example, Hong Kong has determined it requires a minimum of 11 days' cover.
- This target was agreed by industry participants.
- As part of the Inquiry process, Refining NZ (now Channel Infrastructure) expected to repair RAP within 9-10 days in the event of a one-in-20-year RAP outage event.

84. The lease for JUHI will expire in 2035 and the Airport is starting to plan its replacement (but has not yet made any decisions). The new JUHI is likely to have larger storage capacity and will materially improve fuel resilience concerns at the Airport. In this context, it is potentially more beneficial to have additional storage commissioned as soon as possible. Smaller infrastructure can be built quicker and with lower upfront investment and construction costs.

85. The quantity of fuel for the 10 days' cover at 80 per cent would be 32ML for average demand of 4ML or 40ML for a higher demand of 5ML. Current storage capacity at Wiri and JUHI is 44.5ML. But as mentioned in paragraph 12, given the dynamic nature of the fuel supply chain, the actual quantity stored is lower than the theoretical maximum capacity of the tanks.

86. The proposed additional storage capacity of 20ML would be sufficient according to the Group to provide 10 days of cover at 80 per cent of operation during higher demand periods. The estimated cost for building 20ML of storage is $40 million using a factor of $2 per litre (this factor may vary for reconfiguring). Operating costs would be a fraction of the capital cost or be the about the same for a reconfigured tank.

87. The fuel companies supported this option. They said that this level aligns with the Group's engineering plans to increase jet fuel storage. IATA also supported this level of cover.

Option 3 – 12 days' cover at 80 per cent of operations

88. This option would require at least 12 days' cover at 80 per cent of operations.

89. Air New Zealand and BARNZ support a higher stockholding level for the following reasons:

- Short and medium haul aircraft can tanker in extra fuel for the return journey but this increases the weight of the aircraft, burns more fuel, and can create supply shortfalls for other airports.

- Long haul carriers need a full allocation of fuel to reach their destinations. Airlines can make a ‘tech stop’ to pick up fuel on route but this can cause issues for passengers if that tech stop is in a country that requires visas.

90. In the 2017 jet fuel supply disruption caused by the rupture of the RAP, the fuel outage lasted 12 days, including 10 days to repair and two days to recommission the pipeline and fuel to be available for use in aircraft. The 2017 rupture occurred close to the then refinery and would have likely taken longer than 10 days to repair if the rupture occurred in a more inaccessible location. During the consultation, Channel Infrastructure told us that depending on the disruption scenario, it can repair the RAP within 10-14 days with 1-2 days for commissioning.

91. This option is not favoured as it would lead to additional delays and higher costs. Members of the Group told officials during consultation that if a higher level is chosen, fuel companies would need to reconsider their investment decisions, with the tank conversion option being immediately ruled out.

92. One fuel company gave an estimate of a delay of six to 12 months and 30-40 per cent more expensive than Option 2. While we consider the delay estimate reasonable, we are not able to verify the estimated cost increase, although new tank builds would be more expensive than conversions.

93. It is difficult to estimate the costs of Option 3 in comparison to the status quo. This is because the Group has assessed that an additional 20ML tank would provide 10 days cover at 80 per cent operations, and it is difficult to estimate how much more storage capacity is required for additional two days of cover.

94. We can estimate that to provide storage for two additional days’ cover at 80 per cent of operations would require a volume of approximately 10ML. If storing this quantity required an equiavalent new capacity to be built, then assuming a factor of $2 per litre for building these tanks, the cost of additional storage would be $20 million. However in practice it may be possible to accommodate some of this volume into existing capacity, which would be lower cost.

How do the options compare to the status quo/counterfactual?

	Option 1 - Counterfactual / Status quo	Option 2 – 10 days' cover at 80 per cent of operations	Option 3 – 12 days' cover at 80 per cent of operations
Jet fuel cover at airport is resilient to disruptions	0 Storage at the airport was inadequate to meet the Inquiry's recommended 10 days cover earlier this year - although fuel companies appear to be making progress to add more storage, it is difficult to assess the timeline for investment decisions or whether there will be ongoing delays.	++ Aligns with fuel companies' current plans to build storage by end of 2026. Dynamic threshold for stock levels increases with jet fuel demand increases.	+ Increase in days will provide more resilience to disruptions, however there would be an estimated delay of between six and 12 months compared to Option 2, leaving air services at risk of disruption for longer. Dynamic threshold for stock levels increases with jet fuel demand increases.
Costs	0	0 Arguably, no additional costs in the short-term if fuel companies follow up on their stated intention to build further fuel storage (this option ensures that investment occurs in the timeframe indicated). However, capital has not been committed at this stage and the obligation may be considered as 'new' spending. Tanks cost roughly $2 per litre a 20ML tank could cost around $40 million.	-- One estimate is that Option 3 would cost 30-40 per cent more than Option 2, we have not verified this but higher stockholding levels will have greater costs.
Administrative efficiency	0	0 Introduce secondary regulations under the Act.	0 Introduce secondary regulations under the Act.
Overall assessment	0	++	-

Key for options assessment:

++ much better than doing nothing/the status quo/counterfactual

+ better than doing nothing/the status quo/counterfactual
0 about the same as doing nothing/the status quo/counterfactual
- worse than doing nothing/the status quo/counterfactual
- - much worse than doing nothing/the status quo/counterfactual

What option is likely to best address the problem, meet the policy objectives, and deliver the highest net benefits?

95. Option 2 has scored the highest in the evaluation and is our recommended option.

What are the marginal costs and benefits of the option?

Affected groups *(identify)*	**Comment** *nature of cost or benefit (eg, ongoing, one-off), evidence and assumption (eg, compliance rates), risks.*	**Impact** *$m present value where appropriate, for monetised impacts; high, medium or low for non-monetised impacts.*	**Evidence Certainty** *High, medium, or low, and explain reasoning in comment column.*
Additional costs of the preferred option compared to taking no action			
Regulated groups	Marginal compliance costs. Fuel companies have indicated they are committed to additional jet fuel storage at or near the Airport. These regulations are a backstop to ensure that investment occurs in the timeframe indicated. There would be a slight change in what information must be disclosed information as Wiri would need to be reported separately (MSO regulations treat Wiri and RAP as one).	Low	High
Regulators	Costs of developing regulations. Marginal administration costs as already collecting information as part of MSO.	N/A	High
Other parties	N/A	N/A	N/A
Total monetised costs			
Non-monetised costs		*Low*	*High*
Additional benefits of the preferred option compared to taking no action			
Regulated groups	Provides regulatory certainty about how the location-specific MSO will apply to help with planning infrastructure in the short and long term.	N/A	Low
Regulators	MSO regulations allow for collecting information on fuel stock levels for facilities across the country. This information will be used for ongoing monitoring.	N/A	High
Other parties	Intervention would ensure additional infrastructure is built in the timeframes indicated, reducing the risks of disruptions to air services. Improved storage would lead to resilience in air services and mitigate against impacts on people and the economy in the event of a disruption.	High The direct costs for the 2017 disruption were estimated at least $25 million but real costs, including indirect costs on third parties, were likely to be much higher. Modelling by MBIE in 2019 indicates a short-term disruption of the	Low

		RAP or Wiri would cost $23 million.	
Total monetised benefits		N/A	
Non-monetised benefits		*High*	*High*

Section 3: Delivering an option

How will the new arrangements be implemented?

96. The location-specific MSO will be introduced through creating regulations under the Act. The regulations are expected to come into effect beginning of 2027, aligning with indicative timeframe for fuel suppliers to complete construction of extra jet fuel storage at or near Auckland Airport.

97. Converting new fuel storage tanks takes at least 18 months and building new storage tanks takes around two years. So an early 2027 commencement date allows for some flexibility.

98. MBIE will be responsible for the implementation, administration and enforcement of the location-specific MSO. This will involve:

    - updating MBIE's information system to record Auckland Airport's jet fuel stock levels and monitor compliance of obliged parties, and
    - providing guidance to obliged parties on the stockholding requirements and the relevant accounting and information disclosure requirements.

Risk of development of storage infrastructure is slower than expected and obligated parties are non-compliant when the regulations come into effect

99. There is a risk that the development of this infrastructure is too slow to allow compliance when the regulations come into effect.

100. There are existing mechanisms under the Act that would allow fuel suppliers to seek exemptions or make enforceable undertakings. Should exemptions be granted or enforceable undertakings be accepted, obliged parties would not have to meet the minimum stockholding requirements under the proposed regulations temporarily. MBIE will consider applications for exemptions and enforceable undertakings on a case-by-case basis.

Risk of higher than anticipated compliance costs

101. There is a risk that the cost of complying with the location-specific MSO could be higher than anticipated, with flow-on impacts on jet fuel prices and airfares. This could occur if MBIE's understanding of the existing jet fuel storage level at Auckland Airport deviates from the actual storage level. In that case, obligated parties might need to build more storage capacity and hold more fuel stocks than expected.

102. To mitigate risk, we have engaged with both Auckland Airport and fuel suppliers to seek information on jet fuel storage levels at the Airport.

Enforcement

103. There is a risk that obligated parties do not comply with meeting the stockholding obligation. This will be mitigated by the penalties and enforcement clauses in the Act.

How will the new arrangements be monitored, evaluated, and reviewed?

105. Obliged parties must report to MBIE information on jet fuel stockholding level, jet fuel storage capacity, and jet fuel demand for Auckland Airport regularly as part of the MSO from 1 January 2025. This information can be used for the location-specific MSO monitoring purposes.

106. MBIE will also continue to liaise with the fuel sector regarding fuel security issues periodically and when fuel supply issues arise.

107. MBIE will also continue to monitor fuel price movements regularly and the Commerce Commission may undertake fuel market studies should there be significant concern over fuel price increases following the introduction of the obligation. The fuel stocks data collected from obliged parties regularly would allow officials to evaluate the compliance rate and jet fuel resilience at Auckland Airport.

108. The minimum fuel stockholding obligation is expected to be reviewed by 2030, within five years after the primary legislation for the obligation comes into effect. The review is expected to include an assessment of the effectiveness of the location-specific MSO.

109. More broadly, the review will examine whether the minimum onshore fuel stockholding obligation (for both New Zealand as a whole and Auckland Airport) remains fit for purpose, taking into account the following factors:

    - the Government's emissions budget and Emissions Reduction Plans
    - fuel demand in New Zealand
    - fuel mix for transport fleet
    - any relevant data and findings on the resilience of New Zealand's supply chains, such as national and regional fuel stocks data and reports on resilience of international and domestic fuel supply chains, and
    - domestic fuel production capacity – if it is developed to a significant scale, fuel storage capacity may not need to be as high as otherwise required.

Risk of under-investment in jet fuel storage facilities at airports outside of Auckland

110. To meet the location-specific MSO, fuel suppliers may decide to focus their investments on jet fuel storage facilities near Auckland Airport and under-invest in storage facilities at other airports in New Zealand.

111. MBIE will continue monitor jet fuel resilience at other airports. Should MBIE identify any significant jet fuel supply issues at those airports, government may consider further regulations or other measures for addressing those issues.